

REMARKS/ARGUMENTS

Applicants would like to thank the Examiner for his time and thoroughness in reviewing the present application, as embodied by the detailed Office Action, and respectfully submit these remarks/arguments in response thereto.

Status of Claims

Claims 1 – 37 remain pending in this application.

Remarks

In the Office Action, the Examiner rejected claims 1 – 8, 16 – 22, 30 – 35 and 37 under 35 U.S. § 102(e) as being unpatentable over Linder et al. Remaining claims 9 – 15, 23 – 29 and 36 were rejected under 35 U.S. 103(a) and being unpatentable over Linder et al. in view of Dalrymple et al. For the reasons set forth below, it is respectfully submitted that the rejections are improper and should be withdrawn.

The Present Invention

The present invention is directed to a method of calibrating an imaging system, particularly with respect to neutral gray tones. In accordance with the invention, and as described, for example, in claim 1, the method includes a number of steps as follows:

- (1) taking a plurality of measurements of a plurality of near neutral patches that have been printed by the imaging system;
- (2) using a first plurality of sets of colors values of the imaging system's color space;

- (3) the first plurality of sets of color values
 - a. being derived based on a second plurality of sets of color values of a profile connection space (PCS), and
 - b. in accordance with a print table of a color profile of the imaging system mapping color value sets from the PCS to color values sets in the image system's color space;
- (4) a second plurality of sets of color values defining the near-neutral patches in the PCS; and
- (5) computing a third plurality of sets of color values for the imaging system to output a corresponding plurality of neutral gray outputs at the different lightness levels, by interpolation, based at least in part on the received measurements.

The Prior Art

Linder et al. is the primary reference relied by the Examiner to reject all claims. Linder discloses a method for imaging system calibration. However, it does it in an entirely different way than the present invention.

The calibration method disclosed by Linder, as illustrated in Figure 5 and described at Col. 4, Lines 29 – 58, involves the printing of a stored target image. The target image is then scanned and used as the basis for calibrating the image system.

The Linder target image includes a plurality of test patches spread across the color space of the printer. The test patches include:

- (1) step wedges in CMYK colorants;
- (2) solid primary and secondary pairs of CMYK colors; and
- (3) a large number of nearly neutral patches around the $a^*=b^*=0$ axis.

In addition, the desired $L^*a^*b^*$ values for each patch is determined and stored in the image processing module along with the target image.

The Prior Art Rejection

The Examiner has rejected 1 – 8, 16 – 22, 30 – 35 and 37 under 35 U.S. § 102(e) as being unpatentable over Linder et al. This rejection is unfounded as the law is well settled that claimed subject matter is anticipated only if “each and every limitation is found either expressly or inherently, in a single prior art reference.” *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.* 246 F.3d 1368, 1374 (Fed. Cir. 2001) The doctrine of inherency may not be used to establish anticipation unless a prior inherency can be established as a certainty.

Probabilities or possibilities will not sufficient to establish an inherent event.

Continental Can Co. U.S.A., Inc. v. Monsanto, Co., 948 F.2d 1264, 1269 (Fed. Cir. 1991).

Claim 1 recites a number of limitations, including “receiving or taking a plurality of measurements of a plurality of near-neutral patches for different lightness levels printed by an imaging system using a first plurality of sets of color values...” The Examiner relies on Linder’s disclosure of “step wedges in the CMYK colorants” disclosed at Col. 4, line 35 to teach this feature. This reliance is improper as Linder only disclose that his target image includes step wedges in

CMYK colorants and a large number of nearly neutral patches. Linder does not disclose that the neutral patches are in any way based on the step wedges.

Claim 1 further requires that the first plurality of sets of color values are "derived based on a second plurality of sets of color values." The Examiner relies on Linder's desired L*a*b* values disclosed at Col. 4, Lines 51 – 58. According to Linder, these values are "determined, either by measurement or by some combination of measurement and modeling... and stored in the image processing module, as desired values representing the calibration test target along with the instructions for printing the test target." There is no disclosure in Linder that the step wedge (the Examiner's "first plurality of sets of color values") are derived from the desired L*a*b* values. Thus, this feature is not disclosed by Linder.

As demonstrated above, Linder does not disclose each and every limitation of claim 1. Similar limitations are present in independent claims 18 and 32. Thus, these claims, as well as all of the claims that depend there from (claims 2 – 8, 16 – 17, 19 – 22, 30 – 31, 33 – 35 and 37) are not anticipated by Linder et al.

Remaining claims 9 – 15, 23 – 29 and 36 were rejected 35 U.S. 103(a) and being unpatentable over Liner et al. in view of Dalrymple et al. Under a Section 103(a) analysis, the Examiner has the burden of raising a *prima facie* case of obviousness that teaches or suggests all of the limitations of the

rejected claims, and provides a motivation to combine the references. *In re Fritch*, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992).

Obviousness, presents a problematic basis for rejection because the Examiner, in deciding that a feature is obvious, has benefit of the Applicant's disclosure as a blueprint and guide, whereas one with ordinary skill in the art would have no such guide, in which light even an exceedingly complex solution may seem easy or obvious. Once an obviousness rejection has been made, the Applicant is in the exceedingly difficult position of having to prove a negative proposition (i.e., non-obviousness) in order to overcome the rejection. For these reasons, it is well settled that the PTO "bears the initial burden of presenting a *prima facie* case of unpatentability...." *In re Glauq*, 283 F.3d 1335, 1338 (Fed. Cir. 2002). If the Examiner fails to establish the requisite *prima facie* case, the rejection is improper. *In re Rijckaert*, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

The Examiner must satisfy three criteria in order to establish the requisite *prima facie* case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine their teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or combination of references) must teach or suggest all the claim limitations. MPEP §706.02(j), citing *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

More recently, the U.S. Supreme Court has held that for a rejection under 35 U.S.C. § 103(a) to be proper, the Examiner must establish an "apparent reason" to modify the reference or to combine reference teachings. *KSR Int'l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007). The Court found that "[o]ften, it will be necessary ... to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit." *KSR Int'l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007), slip op. at 14 (emphasis added).

"The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious *unless the prior art suggested the desirability of the modification.*" *In re Fritch*, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992)(emphasis added); see also *In re Gordon*, 221 USPQ2d 1125, 1127 (Fed. Cir. 1984).

Finally, "if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP §2143.01.

Evidence rebutting a prima facie case of obviousness can include: "evidence of unexpected results," *Pfizer, Inc. V. Apotex, Inc.*, 480 F.3d 1348,

1369 (Fed. Cir. 2007), evidence "that the prior art teaches away from the claimed invention in any material respect," *In re Peterson*, 315 F.3d 1325, 1331 (Fed. Cir. 2003), and evidence of secondary considerations, such as commercial success and long-felt but unresolved needs, *WMS Gaming, Inc. V. Inn Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999).

In the instant case, the Examiner's burden has not been satisfied, in that the references of record fail to teach, suggest, or otherwise disclose each and every limitation of the present invention; and an apparent reason to combine their teachings is not provided.

The Dalrymple et al. reference is relied on to disclose a number of limitations in the dependent claims that can not be found in Linder. For example, the Examiner admits that Linder fails to teach a "third plurality of sets of color values" as required by claims 9 and 12, a "fourth plurality of color values" as required by claim 10, the "color profile" of claim 11 or the "programming instructions" required by claims 23 and 24.

In combining Dalrymple et al. with Linder, the Examiner merely concludes that it would have been obvious to one of ordinary skill in the art to modify Linder as allegedly taught by Dalrymple as somehow suggested by Dalrymple. As pointed out above, however, "the mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 23

USPQ2d 1780, 1783-84 (Fed. Cir. 1992) In each of the attempts to modify Linder, the Examiner has failed to meet this burden.

Thus, it is respectfully submitted that the rejection of claims 9 – 15, 23 – 29 and 36 under 35 U.S. 103(a) as being unpatentable over Linder et al. in view of Dalrymple et al. is improper and should be withdrawn.

Moreover, Dalrymple does not disclose or suggest the plurality of first and second sets of color values as discussed above with respect to claim 1, 18 and 32. Thus, the rejection of claims 9 – 15, 23 – 29 and 36 is improper and should be withdrawn for this additional reason.

CONCLUSIONS

For above reasons, all claims in the instant application are believed to be in condition for allowance. An early indication of such allowance is respectfully requested.

Respectfully submitted,

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